THE CHICAGO ACADEMY OF SCIENCES

LINCOLN PARK - CHICAGO, ILL.

Leaflet No. 15 June 20, 1940

SHORT DIRECTIONS FOR PRESERVING REPTILES AND AMPHIBIANS

by *Walter L. Necker*

In general every specimen worth preserving at all should be worth all the trouble to make a really perfect study specimen. This at best requires some equipment, such as syringes and ample alcohol, and much time for the proper hardening of specimens. There are times when it is not desireable to take equipment including sufficient alcohol, and when it is equally undesireable or impossible to ship specimen alive to the museum (in general, much the preferred method for future museum use). It is entirely for such emergencies that the following directions are offerered:*

PRESERVING FLUIDS

Ethyl Alcohol is by far the most satisfactory preservative, but because of its expense (when not procured tax free, for institutional use) and the greater time consumed in hardening specimens in it will not be discussed here. *Wood or Methyl Alcohol* (denatured and rubbing alcohols at the druggist) *are not in anyway satisfactory since they harden and shrivel specimens beyond recognition.*

Formalin (a 40% aqueous solution of formaldehyde) is the only passable substitute. It is easily and universally obtainable at drug stores where it sells at about fifty cents a pint which is enough to make two gallons of preservative, i. e. dilution of one part of formalin to 15 parts of water. This dilution may be used for all reptiles and amphibians. After hardening they may be stored in an even greater dilution-1:20.

LABELING

Accurate locality and collecting data is a primary essential in making any specimen worth keeping in a scientific collection. Date, definite locality, and collector are the minimum essentials; the habitat, and any other information, such as food habits, are also very desireable.

If only a few specimens are collected it is preferred to write all this information on the label (field notes by letter), but if numerous or prolonged collecting is planned, much time is saved by merely tying numbers on the specimens and writing the information in a note book.

Be sure to use waterproof fiber tags for these labels, otherwise they may disintegrate in transit. Either soft pencil or India ink may be used.

Frogs and toads should be dropped into preservative alive. They are killed almost immediately and naturally assume a position with legs contracted which is very satisfactory for study specimens. Only very large individuals need to be slit as shown in the figure.

* For complete laboratory directions of preserving specimens see "Methods of Preserving and Labeling Amphibians and Reptiles for Scientific Study" by Howard K. Gloyd, in *Turtox News,* volume 16, number 3, March, 1938.

Newts and salamanders should also be dropped into formalin alive. They generally need to be straightened immediately after all reflexes have stopped so that they can be studied more easily later.

Lizards may be drowned in warm water or in the preservative (if injection is impracticable). They should be slit as shown, and also straightened before hardening.

Snakes receive the same treatment as lizards, except that they should be carefully curled into a spiral in a jar or can and thus hardened. A specimen which is kinked and distorted is practically worthless since it can not be measured or studied with ease and takes up a large amount of space. Be sure to slit the specimen before hardening.

Turtles also may be injected with formalin or drowned either in the preservative or in *warm* water. *Deep slits* should be made near the insertion of the legs, head, and tail so that the preserving fluid may enter the body cavity. *Be sure to pull the head, tail and feet from under the shell before hardening.*

DEAD SPECIMENS

Occasionally it is worthwhile to preserve specimens found dead on roads or elsewhere. The same procedure should be followed except that the slits in the body wall should be more numerous to allow ample interchange of fluids. *Never try to harden more than one specimen of this nature in one container—it* is risky enough with large fresh specimens—for if one should go bad it will be apt to ruin whatever else is with it.

PROPER HARDENING

Proper hardening is the main consideration. All specimens should remain in the fluid until quite firm to the touch---preferably at least a whole day. After hardening they may be packed in tins in *moist* cotton or cheescloth and sent to the museum where they will be transferred to alcohol immediately.

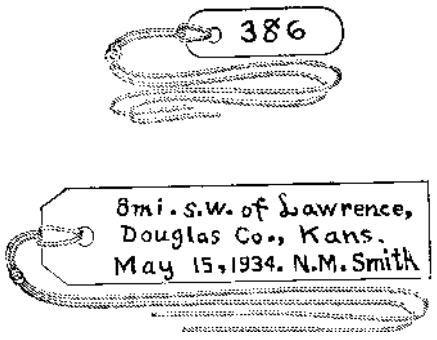

Fig. 1. Waterproof fiber tags recommended for labeling. Actual size. Note method of tying strings.

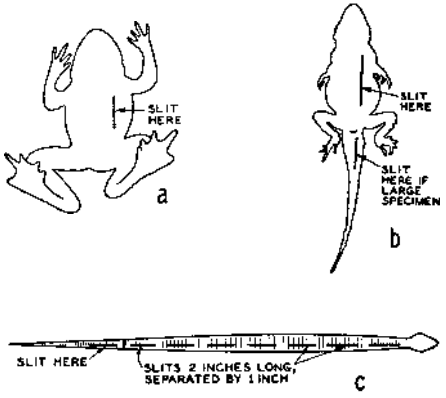

Fig. 2. Diagrams showing positions of cuts to allow preservative to penetrate body cavity (By courtesy of L. M. Klauber)